UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/675,001	09/30/2003	John K. Alex	POU920030134US1	5260

86622 7590 09/01/2010

Fleit Kian Gibbons Gutman Bongini & Bianco P.L.
One Boca Commerce Center
551 NW 77th Street, Suite 111
Boca Raton, FL 33487

EXAMINER	
CHRISTENSEN, SCOTT B	
ART UNIT	PAPER NUMBER
2444	

NOTIFICATION DATE	DELIVERY MODE
09/01/2010	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ptoboca@focusonip.com

UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/675,001
Filing Date: September 30, 2003
Appellant(s): ALEX ET AL.

Jose Gutman (Reg. No. 35,171)
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 7/6/2010 appealing from the Office action mailed 2/19/2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-13 and 15-22 are pending and rejected.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the

subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

5,893,083	ESHGHI	4-1999
2005/0033846	SANKARANARAYAN	2-2005
4,494,193	BRAHM	1-1985

Wikipedia. State Machine, downloaded from the Internet at <http://en.wikipedia.org/wiki/State_machine>.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 5-8, 11, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Eshghi et al. in US Patent No. 5893083 hereafter referred to as "Eshghi".

Regarding Claim 1, Eshghi discloses a method comprising:

receiving at least one policy definition (Eshghi: Column 2, lines 29-48. The model is equivalent to the policy definition.) defined by a user (Eshghi: Column 15, lines 32-59. The policy definition is at least in part defined by the users, as it is catered to the requirements of the users.),

wherein the at least one policy definition includes at least one conditional relationship specification (Eshghi: Column 9, lines 56-60), and

wherein the at least one policy definition programmatically specifies relationships between at least two resources in a set of resources in an autonomic computing system (Eshghi: Column 5, lines 39-45. Eshighi refers to the resources in plural form, meaning that it is reasonable to assume that more than one resource is present.) and defines at least one desired end state therefor (Eshghi: Column 2, lines 53-55), and

wherein the at least one conditional relationship specification indicates a relationship between at least two resources based on a state associated with each of the at least two resources (Eshighi: Column 9, lines 56-60. Eshighi provides for conditional states, where the service entity is available if certain conditions are met. These conditions constitute at least one state associated with each of the at least two resources.), and

wherein the at least one conditional relationship specification comprises at least one conditional statement (Eshighi: Column 9, lines 56-60. The relationships are conditional, and include statements such as the rules set forth in column 9, lines 65-68), and

wherein the at least one policy definition programmatically specifies relationships by using states associated with the at least two resources and wherein the state of one of the at least two resources depends on the state of the other resource (Eshighi: Column 2, lines 55-57. For a service to be available, the system determines the required entities and their relationships.), indicating a decision sequence that is to be followed to reach the at least one desired end state based on the at least one conditional relationship specification (Eshighi: Column 2, lines 53-55. The conditional states indicate a decision sequence, as each step of the conditional statements is a decision.);

harvesting implicit relationships from among the set of resources via a self-discovery, wherein the set of implicit relationships at least indicate one or more of a set of resource dependencies for at least one resource in the set of resources and location requirements for at least one resource in the set of resources (Eshighi: Column 14, lines 11-15), and

wherein self-discovery includes automatically discovering the set of implicit relationships without the user explicitly specifying the implicit relationships (Eshighi: Column 14, lines 11-15);

determining, by the autonomic computing system, that a state of at least one resource in the set of resources substantially satisfies a predetermined requirement of the at least one conditional relationship specification (Eshghi: Column 9, line 56 to Column 10, line 30) and dependencies and requirements of the set of implicit relationships that have been harvested (Eshghi: Column 2, lines 53-55),

wherein the set of resources includes any resources based on the set of implicit relationships that have been harvested (Eshghi: Column 2, lines 53-55);

determining, by the autonomic computing system in response to the state of the at least one resource substantially satisfying the predetermined requirement, that the desired end state can be reached by applying the at least one policy definition conditioned by the at least one conditional relationship (Eshghi: Column 15, lines 24-32); and

placing the autonomic computing system in the desired end state by applying the at least one policy definition (Eshghi: Column 15, lines 24-32).

Regarding Claim 2, Eshghi discloses a method comprising:

receiving at least one policy definition (Eshghi: Column 2, lines 29-48. The model is equivalent to the policy definition.) defined by a user (Eshghi: Column 15, lines 32-59. The policy definition is at least in part defined by the users, as it is catered to the requirements of the users.), wherein the at least one policy definition includes at least one conditional relationship specification (Eshghi: Column 9, lines 56-60), and wherein the at least one policy definition programmatically specifies relationships between resources in an autonomic computing system (Eshghi: Column 5, lines 39-45) and defines at least one acceptable sub-state (Eshghi: Column 14, lines 60-54) and at least one desired end state for the automatic computing system (Eshghi: Column 2, lines 53-55);

determining that the desired end state for the autonomic computing system cannot be reached (Eshghi: Column 14, lines 60-64);

determining that the acceptable sub-state can be reached using at least one of priority ratings, conditional relationship specifications, and alternative relationship specifications (Eshghi: Column 14, line 64 to Column 15, line 2); and

placing the autonomic computing system in an acceptable state, wherein the acceptable sub state becomes a new end-state in response to the substitution (Eshghi: Column 14, line 64 to Column 15, line 2).

Regarding Claim 5, Eshghi discloses, the conditional relationship specifications comprise policy definitions that are applied when the state of a specified resource meets a predetermined requirement (Eshghi: Column 2, lines 53-67. The requirements are set out in terms of the required entities and their relationships to the declarative model for specifying requirements which must be met for the service to be available.).

Regarding Claim 6, Eshghi discloses, the alternative relationship specifications comprise at least one of policy definitions, and conditional relationship specifications, that are applied when the state of a specified resource does not meet a predetermined requirement (Eshghi: Column 3, lines 56-60 and Column 4, lines 1-6. The inference engine determines that a sub-goal is no longer satisfied and seeks the operations which utilizes the operation (alternative relationship specifications) that will enable the sub-goal to be re-satisfied, the operation is based upon relationships between the services.).

Claim 7, lists all the same elements of claim 1, but in a computer readable medium form rather than method form. Therefore, the supporting rationale of the rejection to claim 1 applies equally as well to claim 7.

Claim 8, lists all the same elements of claim 2, but in a computer readable medium form rather than method form. Therefore, the supporting rationale of the rejection to claim 2 applies equally as well to claim 8.

Claim 11, lists all the same elements of claim 5, but in a computer readable medium form rather than method form. Therefore, the supporting rationale of the rejection to claim 5 applies equally as well to claim 11.

Claim 12, lists all the same elements of claim 6, but in a computer readable medium form rather than method form. Therefore, the supporting rationale of the rejection to claim 6 applies equally as well to claim 12.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3, 4, 9, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eshghi in view of Sankaranarayan in US 2005/0033846, hereafter referred to as "Sankaranarayan."

Regarding Claim 3 Eshghi discloses the invention substantially as claimed. However, Eshghi does not explicitly teach: the priority ratings comprise an attribute assigned to a policy definition that determines at least one of a selection of conflicting policy definitions and a sequence for applying the policy definitions.

However, Sankaranarayan teaches, priority based policy and conflict determination and resolution (Sankaranarayan: Paragraph [0011] and Paragraph [0013]).

It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Sankaranarayan's teachings as explained above with the teachings of Eshghi, for the purpose of (Sankaranarayan: Paragraph [0008]) fulfilling the greater need, generated due to growing need for resources, for techniques to manage and allocate the limited resources. Eshghi provides motivation to do so, by providing a method and apparatus, which exploits automatic initiation of management tasks to facilitate the management of large networks (Eshghi: Column 2, lines 22-26).

Regarding Claim 4 Eshghi as modified by Sankaranarayan teaches the invention substantially as claimed. However, Eshghi does not explicitly teach: the attribute

assigned to the policy definition is one of the following: mandatory, a numerical value, and not required.

In the same field of endeavor, Sankaranarayan teaches needed resource is secured by forcing the current user to release the resource thereby making it mandatory (Sankaranarayan: Paragraph [0013]).

It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Sankaranarayan's teachings as explained above with the teachings of Eshghi, for the purpose of (Sankaranarayan: Paragraph [0008]) fulfilling the greater need, generated due to growing need for resources, for techniques to manage and allocate the limited resources. Eshghi provides motivation to do so, by providing a method and apparatus, which exploits automatic initiation of management tasks to facilitate the management of large networks (Eshghi: Column 2, lines 22-26).

Claim 9, lists all the same elements of claim 3, but in a computer readable medium form rather than method form. Therefore, the supporting rationale of the rejection to claim 3 applies equally as well to claim 9.

Claim 10, lists all the same elements of claim 4, but in a computer readable medium form rather than method form. Therefore, the supporting rationale of the rejection to claim 4 applies equally as well to claim 10.

Claim Rejections - 35 USC § 103

Claims 13-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sankaranarayan in view of Eshghi.

Regarding Claim 13, Sankaranarayan discloses an automatic resource manager for an autonomic computing system, the autonomic resource manager comprising:

memory for storing at least one policy definition (Sankaranarayan: Fig. 1, 28);

a resource monitor (Sankaranarayan: Paragraph [0010]) communicatively coupled with each resource in the autonomic computing system, for monitoring, and communicating data with, each resource in the autonomic computing system (Sankaranarayan: Paragraph [0010]. Resources are interfaced with the resource manager which monitors the resources);

an equivalency definer, communicatively coupled with each resource in the autonomic computing system, and with the memory, for defining at least one equivalency representing at least one set of equivalent resources in the autonomic computing system, and storing the at least one equivalency in the memory (Sankaranarayan: Paragraph [0079]. A resource quantifier 106 that determines the amount of resource available for allocation by the resource manager 102 which maintains this information.); and

an automation engine, communicatively coupled with the resource monitor, with at least one resource in the autonomic computing system, and with the memory, for providing available actions as defined by the at least one policy definition to the at least one resource in the in the autonomic computing system in order for the autonomic

computing system to establish and maintain a desired end state (Sankaranarayan: Fig. 18, 1810 and Paragraph [0208], lines 1-5. The dispatch engine after receiving the activity event notifications from the resource manager dispatches further actions to be performed to satisfy the requirements.).

Sankaranarayan does not appear to explicitly disclose:

that the memory for storing at least one policy definition is defined by a user, wherein at least one policy definition includes at least one conditional relationship specification, and wherein the at least one policy definition programmatically specifies relationships between resources in an autonomic computing system, and defines at least one desired end state therefor; and wherein the at least one conditional relationship specification indicates a relationship between at least two resources based on a state associated with each of the at least two resources, wherein the state of one of the at least two resources depends on the state of the other resource, and wherein the at least one conditional relationship specification comprises at least one conditional statement, and wherein the at least one policy definition programmatically specifies relationships by using states associated with the at least two resources and indicating a decision sequence that is to be followed to reach the at least one desired end state based on the at least one conditional relationship specification;

a relationship harvestor for harvesting implicit relationships from among the set of resources via a self-discovery, wherein the set of implicit relationships at least indicate one or more of a set of resource dependencies for at least one resource in the set of resources and location requirements for at least one resource in the set of resources,

and wherein self-discovery includes automatically discovering the set of implicit relationships without the user specifying the implicit relationships;

wherein the equivalency defines the at least one set of equivalent resources that can be substituted for one another in accordance with the at least one policy definition that includes at least one conditional relationship specification to arrive at the desired end state; and

a policy generator, communicatively coupled with the resource monitor and the memory, for providing in the memory a representation of a system-wide graph of available actions and at least one of: conditional relationship specifications, and alternative relationship specifications, corresponding with resources in the autonomic computing system including any resources identified based on the dependencies and requirements of the set of implicit relationships that have been harvested.

However, Eshghi discloses each of these limitations for substantially similar reasons as presented with regard to claim 1.

Thus, it would have been obvious to combine the teachings of Eshghi and Sankaranarayan.

The suggestion/motivation for doing so would have been that combining Eshghi's teachings, for the purpose of **(see Eshghi, Col.2, lines 22-26)** facilitating the management of large networks with a method and apparatus, which exploits automatic initiation of management tasks. Sankaranarayan provides motivation to do so, by fulfilling the greater need, generated due to growing need for resources, for techniques to manage and allocate the limited resources **(see Sankaranarayan, ¶ 0008)**.

Regarding Claim 15, Sankaranarayan as modified by Eshghi teaches the priority ratings comprise an attribute assigned to a policy definition that determines a sequence for applying the policy definition (Sankaranarayan: Fig. 5, table 500).

Regarding Claim 16, Sankaranarayan substantially discloses the elements of claim 13. However, Sankaranarayan does not explicitly teach: the conditional relationship specifications comprise policy definitions that are applied if the state of a specified resource meets a predetermined requirement.

In the same field of endeavor, Eshghi teaches, that the requirements are set out in terms of the required entities and their relationships to the declarative model for specifying requirements which must be met for the service to be available (Eshghi: Column 2, lines 53-57).

It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Eshghi's teachings as explained above with the teachings of Sankaranarayan, for the purpose of (Eshghi: Column 2, lines 22-26) facilitating the management of large networks with a method and apparatus, which exploits automatic initiation of management tasks. Sankaranarayan provides motivation to do so, by fulfilling the greater need, generated due to growing need for resources, for techniques to manage and allocate the limited resources (Sankaranarayan: Paragraph [0008]).

Regarding Claim 17, Sankaranarayan substantially discloses the elements of claim 13. However, Sankaranarayan does not explicitly teach: the alternative relationship specifications comprise at least one of policy definitions and conditional relationship specifications that are applied when the complete desired end state of the system cannot be met.

In the same field of endeavor, Eshghi teaches that the inference engine determines that a sub-goal is no longer satisfied and seeks the operations which utilizes the operation (alternative relationship specifications) that will enable the sub-goal to be re-satisfied, the operation is based upon relationships between the services (Eshghi: Column 3, lines 56-60 and Column 4, lines 1-6).

It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Eshghi's teachings as explained above with the teachings of Sankaranarayan, for the purpose of (Eshghi: Column 2, lines 22-26) facilitating the management of large networks with a method and apparatus, which exploits automatic initiation of management tasks. Sankaranarayan provides motivation to do so, by fulfilling the greater need, generated due to growing need for resources, for techniques to manage and allocate the limited resources (Sankaranarayan: Paragraph [0008]).

Regarding Claim 18, Sankaranarayan substantially discloses the elements of claim 13. Sankaranarayan further discloses distributed resources (Sankaranarayan: Paragraph [0082]).

However, Sankaranarayan does not explicitly disclose:

receiving at least one policy definition defined by a user, wherein the at least one policy definition includes at least one conditional relationship specification, and wherein the at least one policy definition programmatically specifies relationships between resources in an autonomic computing system and defines at least one acceptable sub-state and at least one desired end state for the autonomic computing system; and

the alternative relationship specifications comprise at least one of policy definitions and conditional relationship specifications that are applied when the complete desired end state of the system cannot be met.

However, Eshghi discloses these limitations for substantially similar reasons as presented with regard to claim 3.

Accordingly, it would have been obvious to combine the teachings of Eshghi with Sankaranarayan.

The suggestion/motivation for doing so would have been for the facilitating the management of large networks with a method and apparatus, which exploits automatic initiation of management tasks. Sankaranarayan provides motivation to do so, by fulfilling the greater need, generated due to growing need for resources, for techniques to manage and allocate the limited resources (Sankaranarayan: Paragraph [0008]).

Regarding Claim 19, Sankaranarayan as modified by Eshghi teaches the invention substantially as claimed. Sankaranarayan further discloses (Page 5, ¶0082,

lines 1-3) distributed resources. Sankaranarayan also discloses (Page 1, ¶0011, lines 3-6 & ¶0013, lines 7-11) priority based policy and conflict determination and resolution.

Regarding Claim 20, Sankaranarayan as modified by Eshghi substantially discloses the elements of claim 18. However, Sankaranarayan does not explicitly teach: the conditional relationship specifications comprise policy definitions that are applied if the state of a specified resource meets a predetermined requirement.

In the same field of endeavor, Eshghi teaches the requirements are set out in terms of the required entities and their relationships to the declarative model for specifying requirements which must be met for the service to be available (Eshghi: Column 2, lines 53-57).

It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Eshghi's teachings as explained above with the teachings of Sankaranarayan, for the purpose of (Eshghi: Column 2, lines 22-26) facilitating the management of large networks with a method and apparatus, which exploits automatic initiation of management tasks. Sankaranarayan provides motivation to do so, by fulfilling the greater need, generated due to growing need for resources, for techniques to manage and allocate the limited resources (Sankaranarayan: Paragraph [0008]).

Regarding Claim 21, Sankaranarayan-Eshghi substantially discloses the elements of claim 18. However, Sankaranarayan does not explicitly teach: the

alternative relationship specifications comprise at least one of policy definitions and conditional relationship specifications that are applied when the complete desired end state of the system cannot be met.

In the same field of endeavor, Eshghi teaches the inference engine determines that a sub-goal is no longer satisfied and seeks the operations which utilizes the operation (alternative relationship specifications) that will enable the sub-goal to be re-satisfied, the operation is based upon relationships between the services. (Eshghi: Column 3, lines 56-60 and Column 4, lines 1-6).

It would have been obvious to one of ordinary skill in the networking art at the time the applicant's invention was made to combine Eshghi's teachings as explained above with the teachings of Sankaranarayan, for the purpose of (Eshghi: Column 2, lines 22-26) facilitating the management of large networks with a method and apparatus, which exploits automatic initiation of management tasks. Sankaranarayan provides motivation to do so, by fulfilling the greater need, generated due to growing need for resources, for techniques to manage and allocate the limited resources (Sankaranarayan: Paragraph [0008]).

Claim Rejections - 35 USC § 103

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Eshghi.

With regard to claim 22, Eshghi teaches the invention as substantially claimed, as detailed in claim 1 above, except:

activating the at least one conditional relationship specification when the state of at least one of the at least two resources has been reached; and

dynamically adjusting the policy definition at runtime based on the at least one conditional relationship specification that has been activated.

However, Official Notice (See MPEP 2144.04) is taken that it would have been well known to perform the method Eshghi again when the state of one of the resources included in the dependencies changes state. As a note, the instant claim provides no requirement that the state of at least one of the two resources has been reached. Claim 1, from which claim 22 depends, appears to only refer to the current state of the at least two resources. Applicant should amend the claim to clearly reflect that the state of at least one of the two resources has been reached, and at what stage in the method claim the state has been reached.

Accordingly, it would have been obvious to modify the method of Eshghi to activate the conditional relationship specification when the state of the at least two resources has been reached, and adjust the policy definition at runtime (while the policy definition is in effect) based on the at least one conditional relationship specification that has been activated.

The suggestion/motivation for doing so would have been that when services and resources depend on other services and resources, often times information can become stale, meaning that the current states of at least some of the resources would no longer be valid without some sort of adjustment. By allowing for the adjusting of the policy

definition based on changes to resources that the specific policy definition depends on, the policy definition would be less likely to be implemented based on stale information.

(10) Response to Argument

Issue 1: On pages 13-14 and 17, Appellant argues the rejection of claim 7.

First, on pages 13-14, Appellant argues that claim 7 does not include all the same elements of claim 1. However, as detailed below, Eshghi does disclose any differences between claims 7 and 1 in as much detail as required by the instant claims.

Appellant further states that "The Appellant has consistently informed the Examiner throughout prosecution that claim 7 does not recite the same as claim 1. However Examiner has continually ignored the differences between claim 1 and claim 7…" However, it is noted that the response filed on 11/30/2009 by Appellant states at the bottom of page 15 of the Remarks section, "Independent claim 7 recites similar to independent claim 1, and therefore, the remarks and arguments given above with respect to independent claim 1 are also applicable in support of independent claim 7 and will not be repeated." Similar statements to this can be found in other responses, such as the Remarks filed 6/30/2008 at the bottom of page 19. In reviewing the previous responses from Appellant, it is unclear where any statement informing the Examiner that claim 7 does not recite the same as claim 1 can be found, let alone how it was "consistently informed" to the Examiner. Accordingly, it is unclear how Appellant has consistently informed the Examiner throughout prosecution that claim 7 does not recite the same as claim 1. Rather, Appellant has consistently informed the Examiner

throughout prosecution that claim 7 recites the same as claim 1. It is further noted that the response filed 1/2/2009 was the response that first amended the subject matter cited by Appellant into claim 7.

The portions of claim 7 that are in question are:

1) "wherein the policy definition further comprises a set of resource relationships received that only specify relationships associated with the top-most level set of resources in the set of resources;"

2) "wherein the availability of one or more of the top-most level set of resources is dependent on the availability of one or more resources of a lower level set of resources in a reverse hierarchy of dependencies from top-most level to lowest level set of resources;" and

3) "wherein the set of implicit relationships are relationships associated from the top-most level set of resources to a lower level set of resources in the set of resources."

First, it is noted that the above language fails to explicitly define the function of the reverse hierarchy. Further, the above recitations are all found within wherein clauses, where the actual steps performed by the computer instructions do not appear to directly related to the above language. Rather, the receiving step receives the policy definition, and first and second portions refer to the policy definition. The third portion refers the set of implicit relationships that are harvested. The levels do not appear to be recited anywhere outside of the three portions, nor do the three portions appear to affect the functionality of the instant claim.

According to MPEP 2106 II C, some language may raise a question as to the limiting effect of the language in the claim, where one of the examples explicitly listed is "wherein" clauses. The section explains that language that suggests but does not require steps to be performed does not limit the scope of a claim or claim limitation. In this case, the wherein clauses do not require any steps to be performed by the instructions, nor do the wherein clauses even modify the actual steps being performed. No action is taken based on the levels within the policy definition, nor is any action dependent on the presence of the levels. A person of ordinary skill in the art would recognize that claim 7, in as much detail as claimed, would perform the same steps with the same functionality whether the policy definition has the levels of portions 1 and 2 or not, and whether the set of implicit relationships were associated with the level sets or not. Thus, in light of MPEP 2106 II C, the portions of the instant claim argued by Appellant fail to limit the scope of the instant claim.

Further, Eshghi discloses that there are low-level facts and high-level facts (Eshghi: Column 11, line 55 to Column 12, line 5). For a service to be available, both high-level and low-level conditions are required to be met (Eshghi: Column 12, lines 17-22).

Accordingly, for at least the reason that according to MPEP 2106 II C, the portions of claim 7 cited by Appellant cannot be considered to limit the scope of the instant claim. Further, as Appellant consistently stated that claim 7 is the same as claim 1 throughout prosecution of the instant application (Such as in the remarks filed

11/30/2009 and 6/30/2008), claim 7 should be rejected for substantially similar reasons as claim 1.

Issue 2: On page 15, Appellant argues that "Eshghi fails to teach or suggest that a policy definition programmatically specifies relationships by…indicating a decision sequence that is to be followed to reach the at least one desired end state based on the at least one conditional relationship specification," as in claim 1.

First, it is noted that there is no requirement as to what constitutes a "desired end state," how the desired end state is determined to be desired, or even what constitutes a "state."

It is noted that in the computing arts, there is an abstraction that is often utilized to model the behavior of different systems called a finite-state machine (or FSM). A FSM is a diagram that shows states (usually as circles) with transitions (arrows) connecting the states, where the transitions each have a condition (which is generally labeled with the transition) for the transition to occur. An example of a finite-state machine may be found in 4,494,193 to Brahm et al. in Figure 3. Further, a definition for finite state machine may be found at <http://en.wikipedia.org/wiki/State_machine>, where even though the date of the Finite-State machine article cannot be established, the article is consistent with Brahm, which was filed 1/15/1985.

Meanwhile, the argued claim language presents a decision sequence that is to be followed to reach the at least one desired end state based on the at least one conditional relationship specification. Thus, the "end state" from the perspective of a

person of ordinary skill in the art, when taking into account the concept of a finite-state machine, could constitute any state in a computing system. Further, the term "state," as used in the instant specification, appears to not be explicitly defined, but appears to be used consistently with the definition of the term from the perspective of a person of ordinary skill in the art, which would a the configuration of information in a program or machine.

Eshghi discloses a system that determine facts of the system, and provides for goals for the system to perform (Eshghi: Abstract). Eshghi provides for a declarative model (policy definition) which specifies requirements which must be met for a service to be available (Eshghi: Column 2, lines 53-55). The requirements are set out in terms for the required entities and their relationships (Eshghi: Column 2, lines 55-57). Thus, the desired end state of the service being available is presented, where the requirements constitute the decision sequence that must be followed to reach the state of the service being available. It is noted that the instant claim never provides for what constitutes the decision sequence, and the decision sequence is never claimed as being followed to reach the end state, let alone any requirements as to how the decision sequence is followed.

Thus, it is apparent that Eshghi discloses "that a policy definition programmatically specifies relationships by…indicating a decision sequence that is to be followed to reach the at least one desired end state based on the at least one conditional relationship specification," in as much detail as is required by the instant claim.

Issue 3: On page 16, Applicant argues that a fact in Eshghi is not an implicit relationship that indicates one or more set of resource dependencies for at least one resource in the set of resources and location requirements for at least one resource in the set of resources.

However, in Eshghi, the facts are derived from the information for the implicitly derived from the information available (Eshghi: Column 14, lines 11-12). The facts are used to carry out inferencing operations on the model (Eshghi: Abstract). Further, the goal depends on the facts (Eshghi: Column 2, lines 60-65).

Meanwhile, in the instant claim, the implicit relationships "at least indicate one or more of a set of resource dependencies for at least one resource in the set of resources and location requirements for at least one resource in the set of resources." Thus, the implicit relationships merely "indicate" the dependendcies and location requirements.

It is noted that the instant claim appears as part of a wherein clause, where the information in the implicit relationships appears to have no substantial effect on the implementation of the steps of the instant claim, nor has any impact on the results of the steps of the instant claims. As detailed above, according to MPEP 2106 II C, some language may raise a question as to the limiting effect of the language in the claim, where one of the examples explicitly listed is "wherein" clauses. The section explains that language that suggests but does not require steps to be performed does not limit the scope of a claim or claim limitation. The wherein clause describing the implicit relationships do not appear to require any steps to be performed, and does not modify

the performance of any steps. Thus, the language "wherein the set of implicit relationships at least indicate one or more of a set of resource dependencies for at least one recourse in the set of resources and location requirements for at least one resource in the set of resources" does not appear to limit the scope of the instant claim.

In Eshghi, the relationships "at least indicate" the dependencies, as the facts are derived (Eshghi: Column 14, lines 11-12), where the goal is dependent on the fact (Eshghi: Column 2, lines 60-65). Further, Eshghi discloses that location is a consideration in the implementation of management tasks (Eshghi: Column 2, lines 10-15). Lacking any detail of how the implicit relationship "indicates" the dependencies and location requirements, it is apparent that Eshghi teaches the set of implicit relationships in as much detail as in the cited language of the instant claim.

Accordingly, as per MPEP 2106 II C, the instant language does not appear to limit the scope of the instant claim, as the language has no substantial effect on the implementation of the harvesting nor any other step of the instant claim. Further, Eshghi teaches the implicit relationships in as much detail as in the cited language, as the cited language only requires that the implicit relationships "at least indicate" the cited information.

Issue 4: On pages 16-17, Appellant argues that the goal of Eshghi is not a "desired end state of the autonomic computing system." Appellant then proceeds to argue how the goal in Eshghi "is a goal for an entity of a service." Thus, it appears that Appellant is

arguing the difference between the "entity of a service" of Eshghi and the autonomic computing system, as in claim 2.

The term "autonomic" can be defined as being "autonomous," which can be defined as "independent." In the case of the instant application, Appellant refers to the autonomic computing system as being a network of systems (Specification: Page 11, lines 4-20). Meanwhile, in Eshghi, the goals refer to goals of a computing system (Eshghi: Abstract). Eshghi is directed to a problem of managing system entities in a network (Eshghi: Column 1, lines 19-28). Thus, while each goal of Eshghi may be directed specifically towards a specific service or service entity, the goal is still a goal of the system as a whole, which is a network such as in Figure 2 of Eshghi. Further, Eshghi utilizes the word "computer system" to refer to the overall network (Eshghi: Column 4, lines 20-22 and Figure 1. The schematic view of the "computer system" is actually a view of a network.).

Thus, both Appellant's invention and Eshghi disclose a desired end state of the autonomic computing system.

Issue 5: On page 18, Appellant argues the rejection of claim 13. More specifically, Appellant argues that Sankaranarayan does not teach "an equivalency definer, communicatively coupled with each resource in the autonomic computing system, and with the memory, for defining at least one equivalency representing at least one set of equivalent resources in the autonomic computing system, and storing at least one equivalency in the memory." Appellant argues that the "counting" of the number of

resources, as in Sankaranarayan does not teach or suggest the defining performed by the equivalency definer.

However, the teaching of Sankaranarayan does not specifically teach counting resources. Rather, Sankaranarayan teaches counting the quantity of a given resource. For example, in the cited passage, the counter identifies how many tuners are freed to be used. These tuners are equivalent to each other, and Sankaranaryan keeps track of how many of these equivalent resources are available. It is noted that the instant claim provides no detail of how the equivalency is defined, or what the function of the equivalency is. Thus, the counting of Sankaranarayan is within the scope of the defining of at least one equivalency, as the counting counts equivalent resources (e.g. tuning resources), and stores a count of these equivalent resources.

Issue 6: On pages 19-20, Appellant argues that Sankaranarayan does not teach or suggest "providing available actions as defined by the at least one policy definition to the at least one resource in the autonomic computing system in order for the autonomic computing system to establish and maintain a desired end state."

First, it is noted that the phrase of "in order for the autonomic computing system to establish and maintain a desired end state" is clearly a recitation of intended use as per MPEP 2106 II C, as the phrase "in order" does not recite functionality that is actually performed, but rather recites the intended use of the providing step. Thus, the language "in order for the autonomic computing system to establish and maintain a desired end state" fails to limit the scope of the instant claim.

Appellant argues that Sankaranarayan "only teaches that notifications are sent to policies (which are policies for allocating resources such as conflict resolution policies." However, it is noted that conflicts notifications define possible actions to be performed, as a conflict is a conflict between at least two possible actions (Sankaranarayan: Paragraph [0221]). The policies are then used to determine the relative importance of the activities, and then prioritizes the activities to determine which of the activities to perform (Sankaranarayan: Paragraph [0223]).

The instant claim, meanwhile, does not provide detail how what constitutes "a desired end state," how the end state is selected, how the actions are determined. Meanwhile, a "conflict" defines actions, each action corresponding to desired end states.

Issue 7: On pages 20-22, Appellant argues the rejection of claims 13 and 18, stating that the claim elements are similar to the claim elements already discussed in other claims, such as claims 1, 2, 7, and 8 for claim 13 and claim 2 for claim 18. Thus, the arguments presented above with respect to these claims (in Issues 1-4) apply to the arguments presented on pages 20-22, as stated by Appellant.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/S. C./

Examiner, Art Unit 2444

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2444

Conferees:

/William C. Vaughn, Jr./

Supervisory Patent Examiner, Art Unit 2444

/RANODHI N SERRAO/

Ranodhi N. Serrao
Primary Examiner, Art Unit 2444